ABSTRACT OF THE DISCLOSURE

The present invention generally provides an electro-chemical deposition system that is designed with a flexible architecture that is expandable to accommodate future designs rules and gap fill requirements and provides satisfactory throughput to meet the demands of other processing systems. The electro-chemical deposition system generally comprises a mainframe having a mainframe wafer transfer robot, a loading station disposed in connection with the mainframe, a rapid thermal anneal chamber disposed adjacent the loading station, one or more processing cells disposed in connection with the mainframe, and an electrolyte supply fluidly connected to the one or more electrical processing cells. One aspect of the invention provides a post electrochemical deposition treatment, such as a rapid thermal anneal treatment, for enhancing deposition results. Preferably, the electro-chemical deposition system includes a system controller adapted to control the electro-chemical deposition process and the components of the electro-chemical deposition system, including the rapid thermal anneal chamber disposed adjacent the loading station.

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